DERWENT-ACC-NO: 1996-220374
DERWENT-WEEK: 199622
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TITLE: Removal of nickel-contg. hydrogenation catalyst
residues from polymers
- by treating polymer soln. with maleate complexing agent,
used in specific wt.
ratio in relation to nickel content

INVENTOR: KOVSHOV YU, S; MOISEEV, V V ; ZORNIKOV, I P

PATENT-ASSIGNEE: VORON SYNTH RUBBER RES INST[VOSYR]

PRIORITY-DATA: 1992SU-5061131 (June 24, 1992)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
RU 2043996 C1	September 20, 1995	N/A
004	C08F 006/08	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
RU 2043996C1	N/A	1992SU-5061131
June 24, 1992		

INT-CL (IPC): C08C019/02; C08F006/08

ABSTRACTED-PUB-NO: RU 2043996C

BASIC-ABSTRACT: Impurities derived from the use of
Ni-contg. hydrogenation
catalysts can be effectively removed from conjugated diene
polymers and
copolymers by means of precipitation with a maleate.
Polymer solns. are
treated with the complexing agent of formula
OH-C(O)-CH=CH-C(O)O(CH2)n
-OC(O)-CH=C H-C(O)-OH (I) where n = 2 or 4, using a
maleate/Ni ratio of
(1-10):1.

USE - In the mfr. of hydrogenated diene polymers for use in

medicine,
electrical engineering, construction and the petrochemical
industry.

ADVANTAGE - Residual Ni content is reduced to
0.0003-0.0006%.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:
REMOVE NICKEL CONTAIN HYDROGENATION CATALYST RESIDUE
POLYMER TREAT POLYMER
SOLUTION MALEATE COMPLEX AGENT SPECIFIC WEIGHT RATIO
RELATED NICKEL CONTENT

DERWENT-CLASS: A12 E17

CPI-CODES: A10-E13; A10-G01B; E05-L02C; E10-C02F; E11-Q02;
N02-C;

CHEMICAL-CODES:
Chemical Indexing M3 *01*
    Fragmentation Code
    H7   H722 J0   J014 J1   J172 J2   J272 M280 M312
    M314 M321 M322 M323 M332 M342 M382 M383 M391 M392
    M416 M781 M903 M904 Q120 Q504 Q508 R023
    Markush Compounds
    199622-D2201-R

Chemical Indexing M3 *02*
    Fragmentation Code
    A428 A960 C710 H7   H721 J0   J012 J171 J2   J271
    J272 M220 M222 M232 M272 M281 M282 M312 M321 M332
    M342 M382 M391 M411 M510 M520 M530 M540 M630 M730
    M750 M903 M904 Q120
    Markush Compounds
    199622-D2202-C 199622-D2202-X

ENHANCED-POLYMER-INDEXING:
Polymer Index [1.1]
    018 ; G0817*R D01 D51 D54 D56 ; H0000 ; H0011*R ; L9999
L2391 ;
    L9999 L2722 L2711 ; M9999 M2722 M2711 ; S9999 S1605*R
Polymer Index [1.2]
    018 ; ND07 ; N9999 N6666 N6655 ; N9999 N6848 N6655 ;
Q9999 Q7330*R
    ; Q9999 Q8037 Q7987 ; Q9999 Q6939*R ; Q9999 Q6995*R ;

Q9999 Q6826*R
    ; B9999 B4535 ; B9999 B3703 B3690
Polymer Index [1.3]
    018 ; Ni 8B Tr ; C999 C000*R ; C999 C271
Polymer Index [2.1]
    018 ; R00708 G0102 G0022 D01 D02 D12 D10 D19 D18 D31
D51 D53 D58
    D76 D88 ; R00806 G0828 G0817 D01 D02 D12 D10 D51 D54
D56 D58 D84
    ; H0022 H0011 ; S9999 S1605*R ; L9999 L2391 ; L9999
L2722 L2711
    ; M9999 M2722 M2711 ; P0328 ; P1741 ; P0351
Polymer Index [2.2]
    018 ; ND07 ; N9999 N6666 N6655 ; N9999 N6848 N6655 ;
Q9999 Q7330*R
    ; Q9999 Q8037 Q7987 ; Q9999 Q6939*R ; Q9999 Q6995*R ;
Q9999 Q6826*R
    ; B9999 B4535 ; B9999 B3703 B3690
Polymer Index [2.3]
    018 ; N9999 N6177*R ; N9999 N6804*R N6655
Polymer Index [2.4]
    018 ; E01 E00 D01 D11 D10 D12 D53 D51 D59 D61*R D63
F41*R F36 F35
    ; C999 C102 C000 ; C999 C271

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1996-069847

L Number	Hits	Search Text	DB	Time stamp
1	223	diels$1alder near2 dienophile$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:34
2	58416	(maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:49
3	130927	butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50
4	68787	butene or pentene or hexene or heptene or octene or nonene or decene	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50
5	58567	(diels$1alder near2 dienophile$1) or ((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50
6	11584	((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1) and (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:51
7	11584	((diels$1alder near2 dienophile$1) or ((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1)) and (((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1) and (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:51
13	170893	olefin$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:56
14	203446	olefin$1 or (butene or pentene or hexene or heptene or octene or nonene or decene)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:56
15	31871	conjugat$4 near2 (diolefin$1 or diene$1)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:57
16	5146310	separat$5 or remov$5 or recover$3 or isolat$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:00

17	145890	(conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:40
18	1240	(conjugat$4 near2 (diolefin$1 or diene$1)) with (separat$5 or remov$5 or recover$3 or isolat$4) with ((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:39
19	96	((conjugat$4 near2 (diolefin$1 or diene$1)) with (separat$5 or remov$5 or recover$3 or isolat$4) with ((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene))) and ((diels$1alder near2 dienophile$1) or ((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:02
22	5284	diels$1alder	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:34
23	515876	puri$6	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:35
25	697	(separat$5 or remov$5 or recover$3 or isolat$4) with ((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)) with (olefin$1 or (butene or pentene or hexene or heptene or octene or nonene or decene))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:41
26	25	(separat$5 or remov$5 or recover$3 or isolat$4) with ((diels$1alder near2 dienophile$1) or ((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1)) with (olefin$1 or (butene or pentene or hexene or heptene or octene or nonene or decene))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:42

27	2254	((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)) with (react$5) with (ethylene$1 or acetylene$1)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:51
28	33	(((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)) with (react$5) with (ethylene$1 or acetylene$1)) with (puri$6 or (separat$5 or remov$5 or recover$3 or isolat$4)) with (olefin$1 or (butene or pentene or hexene or heptene or octene or nonene or decene))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 16:02
29	144	(((diels$1alder near2 dienophile$1) or ((maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1)) or diels$1alder) with (puri$6 or (separat$5 or remov$5 or recover$3 or isolat$4)) with ((olefin$1 or (butene or pentene or hexene or heptene or octene or nonene or decene)) or ((conjugat$4 near2 (diolefin$1 or diene$1)) or (butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene)))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 16:03

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	223	diels$1alder near2 dienophile$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:34	
2	BRS	L2	58416	(maleic adj andydride$1) or benzoquinone$1 or fumarate$1 or maleate$1 or di$1alkyl$1acetylene$1di$1carbonxylate$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:49	
3	BRS	L3	130927	butadiene$1 or pentadiene$1 or hexadiene$1 or hexadiene$1 or hexatriene$1 or heptadiene$1 or heptatriene or octadiene or octadiene or nonadiene or nonadiene or nonatriene or nonatetraene or decadiene or decatriene or decatetraene or decapentaene	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50	
4	BRS	L4	68787	butene or pentene or hexene or heptene or octene or nonene or decene	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50	
5	BRS	L5	58567	1 or 2	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:50	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
6	BRS	L6	11584	2 and 3	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:51	
7	BRS	L7	11584	5 and 6	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:51	
8	BRS	L13	170893	olefin$1	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:56	
9	BRS	L14	203446	13 or 4	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:56	
10	BRS	L15	31871	conjugat$4 near2 (diolefin$1 or diene$1)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 14:57	
11	BRS	L16	5146310	separat$5 or remov$5 or recover$3 or isolat$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:00	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
12	BRS	L17	145890	15 or 3	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:40	
13	BRS	L18	1240	15 with 16 with 17	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:39	
14	BRS	L19	96	18 and 5	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:02	
15	BRS	L22	5284	diels$1alder	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:34	
16	BRS	L23	515876	puri$6	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:35	
17	BRS	L25	697	16 with 17 with 14	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:41	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
18	BRS	L26	25	16 with 5 with 14	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:42	
19	BRS	L27	2254	17 with (react$5) with (ethylene$1 or acetylene$1)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 15:51	
20	BRS	L28	33	27 with (23 or 16) with 14	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 16:02	
21	BRS	L29	144	(5 or 22) with (23 or 16) with (14 or 17)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2002/09/17 16:03	